



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,385	06/13/2001	Satsuki Tsukuda	56087 (70551)	5189
21874	7590	01/27/2005	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			BATTAGLIA, MICHAEL V	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/880,385

Applicant(s)

TSUKUDA ET AL.

Examiner

Michael V Battaglia

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 20 is/are pending in the application.
- 4a) Of the above claim(s) 7-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 29 September 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This action is in response to Applicant's amendment, filed September 3, 2004. Claims 1 and 3-20 are pending. Claims 7-17 have been withdrawn from further consideration.

#### ***Claim Rejections - 35 USC § 112***

1. Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 19 and 20 recite the limitation "the orthogonal direction" in line 2. There is insufficient antecedent basis for this limitation in the claim. The limitation will be interpreted as – the focus direction-- in the prior art rejections below.

#### ***Claim Objections***

2. Claims 1, 3, 4 and 6 are objected to because of the following informalities:
- a. In claims 1 and 3, it is unclear where the preamble ends and the specification begins, making it difficult to determine scope of the claims.
  - b. In line 2 of claim 4, replacing "the objective lens" with –an objective lens– is suggested to avoid improper antecedent basis issues.
  - c. Replacing "arranged" in line 2 of claim 6 with –are arranged—and "direction" in line 3 of claim 6 with –direction and– is suggested.
- Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. Claims 1, 3-6 and 18-20 rejected under 35 U.S.C. 102(e) as being anticipated by Wakabayashi et al (hereafter Wakabayashi) (US 6,747,921).

In regard to claim 1, Wakabayashi discloses a tilt correction method of a movable portion (Figs. 1, 2 and 4-7, element 50) for correcting tilt of said movable portion caused when said movable portion is moved in a direction orthogonal to a longitudinal direction of an elastic supporting member (hereinafter referred to as an orthogonal direction), said movable portion being connected to a fixed portion (Figs. 1 and 2, element 51) by a plurality of elastic supporting members (Figs. 1, 2 and 4-7, elements 8a-8d and 9a-9d and Col. 7, lines 10-27 and 40-42) and displaceably arranged in said orthogonal direction (Figs. 1, 2 and 4-7, element F), each of said plurality of elastic supporting members having at least one bent portion (Figs. 1 and 4-7, elements 9a-9d), wherein the tilt of said movable portion is corrected by varying expansion/contraction amounts of said bent portions of said plurality of elastic supporting members caused when said movable portion is moved in said orthogonal direction (Figs. 4-7 and Col. 10, line 36-Col. 11, line 45).

In regard to claim 3, Wakabayashi discloses a tilt correction method of an objective lens (Figs. 1, 2 and 4-7, element 1) for an optical disk (Fig. 1, element 16) for correcting tilt of a movable portion (Figs. 1, 2 and 4-7, element 50) caused when moved in a focus direction (Figs. 1, 2 and 4-7, element F), said movable portion holding said objective lens, a fixed portion (Figs. 1 and 2, element 51), and a plurality of elastic supporting members (Figs. 1, 2 and 4-7, elements 8a-8d and 9a-9d and Col. 7, lines 10-27 and 40-42) connecting said movable portion and said fixed portion for elastically supporting said movable portion in a manner displaceable at least in the focus direction (Col. 10, lines 32-35) are being provided, wherein said elastic supporting members

Art Unit: 2652

each have at least one bent portion (Figs. 1 and 4-7, elements 9a-9d) bent approximately in the focus direction, and said bent portions of said elastic supporting members arranged in parallel in the focus direction are adjusted to cause expansion/contraction of said elastic supporting members in a direction offsetting a moment produced from deflection of said elastic supporting member (Figs. 4-7; Col. 9, line 63-Col. 10, line 3; and Col. 10, line 36-Col. 11, line 45).

In regard to claim 4, Wakabayashi discloses an objective lens driving device (Figs. 1 and 2) for an optical disk (Fig. 1, element 16) including a movable portion (Figs. 1, 2 and 4-7, element 50) holding an objective lens (Figs. 1, 2 and 4-7, element 1), a fixed portion (Figs. 1 and 2, element 51), and a plurality of elastic supporting members (Figs. 1, 2 and 4-7, elements 8a-8d and 9a-9d and Col. 7, lines 10-27 and 40-42) connecting said movable portion and said fixed portion and elastically supporting said movable portion in a manner displaceable at least in a focus direction (Figs. 1, 2 and 4-7, element F), wherein each of said plurality of elastic supporting members has at least one bent portion (Figs. 1 and 4-7, elements 9a-9d), comprising correction control means (Fig. 3a) for controlling tilt of said movable portion caused when moved in the focus direction by adjusting deflections of said bent portions of said elastic supporting members arranged in parallel in the focus direction to cause expansion/contraction of said elastic supporting members in a direction offsetting a moment produced from deflection of said elastic supporting member (Figs. 4-7; Col. 9, line 63-Col. 10, line 3; and Col. 10, line 36-Col. 11, line 45).

In regard to claim 5, Wakabayashi discloses that each said elastic supporting member (Figs. 1, 2 and 4-7, elements 8a-8d) has at least one bent portion (Figs. 1 and 4-7, elements 9a-9d) bent approximately in the focus direction (Figs. 1, 2 and 4-7, element F) for adjustment of deflection (Figs. 4-7 and Col. 10, line 36-Col. 11, line 45).

In regard to claim 6, Wakabayashi discloses that said-two of said plurality of elastic supporting members are arranged in parallel approximately in the focus direction (Fig. 1) and are symmetric about a surface perpendicular to the focus direction (Figs. 1 and 4).

In regard to claim 18, Wakabayashi discloses that said bent portions (Figs. 1 and 4-7, elements 9a-9d) are bent approximately in the orthogonal direction (Figs. 1, 2 and 4-7, element F).

In regard to claims 19 and 20, Wakabayashi discloses that said bent portions (Figs. 1 and 4-7, elements 9a-9d) are bent approximately in the focus direction (Figs. 1, 2 and 4-7, element F).

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1 and 3-6 have been considered but are moot in view of the new ground(s) of rejection. However, it is noted that the movable portions (Figs. 1 and 4-7, elements 9a-9d) together with the wires (Figs. 1, 2 and 4-7, elements 8a-8d) of Wakabayashi read on the claimed supporting members having bent portions. It is further noted that when the movable portions pivot around pivotal axes S1 and S2 of Figs. 4-7 to correct tilt, the bents portions are expanded/contracted (Figs. 4-7) and the claims are met.

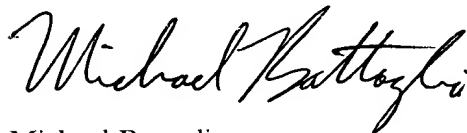
#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

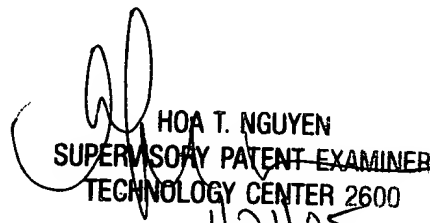
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2652

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Battaglia



HOA T. NGUYEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600  
11/21/05